

believes that these remarks distinguishing claim 9 from the Long reference will be helpful to the Examiner.

The preferred embodiment of the liner claimed in claim 9 is as illustrated in Fig. 7. The liner is formed of two separate sections of flexible fibrous material which are bonded together. A collar 100 of the same resin absorbable material is bonded to a lining tube 14. Lining tube 14 is dimensioned to fit within be and urged against the inner wall of the lateral pipeline to be lined and collar 100 is designed to be urged against the inner wall of the main pipeline at the lateral connection. This configuration enables the formation of an effective seal at the intersection between the lateral and main pipeline. As discussed at page 7 of the specification, collar 100 is formed of similar material as lining tube 14. Thus, both elements of the liner are fully flexible and conformable. They are able to conform to the unique shape and configuration of the intersection. When impregnated with resin and cured, the two elements will cure at substantially the same rate with the lining tube urged against the interior of the lateral and the upper planar surface of collar 100 urged against the interior of the main pipeline. These features are emphasized in claim 9.

A particularly useful feature of the liner with collar of Fig. 7 as now claimed more clearly is that it can be installed into the lateral from the main line out. This lining operation can be done by an apparatus of the type illustrated in Fig. 1, or preferably the type as shown in Figs. 5 and 6. This is in marked contrast to the lateral liner with flexible retainer of Long et al. which is designed to be pushed into the lateral from an access end towards the terminal end at the main pipeline. The desirability of the liner of Fig. 7 is that it forms an effective seal at the lateral/mainline intersection due to the flexibility and conformability of collar 100.

As those skilled in the art of lining existing pipelines, particularly sanitary in-ground sewers

are well aware, in practice the intersection between lateral pipelines and main pipelines do not conform to close tolerances. Not only are there variances in dimensions, but also differences in shape and angle of installation. Moreover, the deterioration of the existing conduit often occurs at the intersection. This means that having a truly flexible and fully conformable liner to line the lateral and seal the intersection is highly desirable. This enables the liner to cure with the lining tube urged against the interior of the lateral and the collar urged against the interior of the main line at the intersection for forming an effective seal.

Turning to the Advisory Action, the Examiner maintained the 35 U.S.C. §103 rejection of claim 9 over Long et al. (U.S. Patent No. 5,108,533). The Examiner indicated that the request for reconsideration was considered but did not place the application in condition for allowance because the Section 103 rejection of claim 9 over Long was maintained as proper. This rejection is respectfully traversed for the following reasons.

Initially, it should be noted that in the previous Office Action of June 4, 1999 setting forth the final rejection of then pending claims 9-12, claim 9 was rejected under 35 U.S.C. §103(a) as being unpatentable over Long for the reasons of record in paragraphs 4-7 of the Office Action mailed on December 10, 1998 (Paper No. 9). The Examiner did express some confusion as to how the claimed shapeless and fully conformable collar operates differently from Long's resilient expandable one.

This question can be answered in part by looking to the structure in Long and the manner in which the lateral tubular lining is installed. As discussed earlier, the lateral lining in Long is inserted into the lateral from the access end at the service towards the main line. The flexible tubular member having a flexible retainer secured at the leading end is to be positioned within the main pipeline. The liner is forced into the lateral until the flexible

retainer is seated within the main pipe approximate the service pipe terminal and the trailing end is position approximate the service pipe access end. Once the flexible retainer enters the main pipeline which is larger in diameter than the lateral, the retainer returns to its expanded shape. The tubular liner is then urged towards the access end of the lateral thereby seating the flexible retainer at the opening to the lateral.

In marked contrast to this method of installation, applicant's claimed flexible lateral lining is installed from the inside of the main line into the terminal end of lateral. This is done by the apparatus illustrated in FIG. 1 wherein the flexible collar is seated on the outside of a bladder at the opening of the lateral and fluid pressure is applied to invert the tubular portion of the lining into the lateral. In this case, there is no need to provide a retaining structure as the flexible retaining element in Long since the collar is tightly positioned between the expanding bladder in the main pipeline and the main pipeline wall. Moreover, when using applicant's tubular lateral lining, one does not need to compress the size of the opening of the collar to fit in the lumen of the lateral, since the liner or collar does not need to pass through the smaller lateral pipeline. It is inserted from the inside of the larger main pipeline into the lateral.

Keeping in mind these different methods of installation helps highlight the differences in structure. The Examiner has indicated properly that how the lining and collar are put into place is not a persuasive basis for patentability, since this does not go to the structure of the lining. However, picking up on this note, the Examiner should appreciate that the structures are in fact significantly different because they are to be installed differently. These differences are as follows.

① In three times amended claim 9, applicant has emphasized that the lining is formed of two elements. These are the tubular portion which fits into the lateral and the collar which seats at the main pipeline at the junction with the two elements bonded together. In contrast to this, Long provides a single member of resin impregnable flexible material which is wrapped about a flexible retainer ring. These features are illustrated in FIG. 7 wherein the tubular lining is shown wrapped about flexible element 46 to fold back on itself to form a collar portion having the flexible retainer surrounded in the resin impregnable material. This structure is described by Long in detail at column 6 beginning at line 27. Here, on no less than three occasions, the flexible retainer 46 is described as position within a "roll-over portion" of the tubular portion and how this "overlap" tubular member is "rolled-over" the flexible retainer 46 to engage the outer surface where diameter of the flexible tubular member assembly. In view of this when the rolled over portion engages the tubular portion at a point above at an angle the end of the tubular length. In contrast, claim 9 calls for the collar to be bonded to the tubular section at the intersection, not along a length of the outside of the tube as in Long.

This leaves little doubt that the tubular assembly in Long is a single continuous length of flexible resin impregnable material and not two individual elements which are bonded together as provided more clearly in three times amended claim 9.

② Long describes the flexible tubular member assembly as that of the conventional cured in place type liner constructed of a felt fabric having a polymeric coating. The felt fabric layer is provided to hold the curable resin with the polymeric coating preventing loss of the resin and allowing inversion of the tube using a fluid, such as water, without driving the resin out of the felt layer. By providing a tubular assembly having the rolled-over portion

as shown in FIG. 7, the Long assembly would typically have the polymeric coating on the outside of flexible tube 41 so it can be impregnated with resin inside the coating. The felt coating would then be on the outside surrounding flexible retainer 46. Thus, the tubular portion and rolled-over portion would present different surfaces to the interior of the lateral and the interior of the main at the lateral connection.

Again, in contrast to this, by bonding two similar materials applicant can provide the polymeric coating or the felt layer on the upper surface of the collar facing the tubular portion. This provides a liner wherein the resin impregnated felt material is placed up against the interior of the lateral and is also against the interior of the main line during installation from the main line out into the lateral.

This particular feature is significant because the lateral would usually be lined following lining the main pipeline. When the main pipeline is lined and the lateral opening cut in standard practice, a lateral assembly with a sealing collar as provided in FIG. 7 by applicant, the upper surface of the collar would be urged against the newly lined interior surface of the main line. If this upper surface of the collar is an uncured resin impregnated felt as contemplated by applicant, this uncured resin material would then bond to the newly lined main line. Further, this construction would allow for the fluid pressure to evert the tubular portion 14 to urge the felt layer against the inside of the lateral in a similar fashion that the main line is lined.

These advantages present when using the structure set forth in three times amended claim 9 would not be available when using a lateral lining assembly provided by Long. Thus, not only does the manner in which the lining installed differs significantly and dictate a

different structure, but the differences in structure as claimed enable applicant to install the lateral lining in this different manner than Long.

Looking back to Paper No. 13, it was noted above that the rejection over Long referred back to the Office Action mailed on December 10, 1998, Paper No. 9. When looking at Paper No. 9, the sole rejection of claim 3 was under 35 U.S.C. §102(b). However, as noted in the Advisory Action, the Examiner restated a rejection only under Section 103(a). The rationale for the Section 102 rejection over Long was simply that Long taught a flexible tubular member impregnated with a thermal-plastic resin and flexible retainer in light of the then language of claim 9. However, since claim 9 has been amended since then, it is respectfully submitted that this Section 102 is simply not applicable. Moreover, the rejection of claims 10-11 in Paper No. 10 are simply not applicable to three time amended claim 9.

A [In view of this, applicant respectfully submits that there is no affirmatively stated rejection of claim 9 under Section 103(a) and the claim should be allowable. However, even applying the stated rationale for relying on Long against claims 10 and 11, there is simply no teaching or suggestion within Long to provide the structure set forth in three times amended claim 9. As noted above, this structure provides for two separate elements which are bonded together at the intersection of the planes so that there is a tubular element for insertion into the lateral bonded to a collar of the same material which is adapted to seat within the main pipeline at the lateral connection. This enables applicant to provide facing surfaces of the same polymeric material or felt material so that the liner may be installed in a desired manner as discussed. For these reasons, applicant respectfully submits that three times amended claim 9 is clearly not shown or suggested by Long and represents an improvement worthy of

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allowance. Accordingly, it is respectfully submitted that the rejection of claim 9 over Long should be withdrawn.

For the reasons set forth herein, applicant respectfully submits that three times amended claim 9 is not shown or suggested in Long and accordingly is in condition for immediate allowance. The Examiner is respectfully requested to reconsider this application at an early date with a view towards issuing an immediate Notice of Allowance. If upon review of the application, if the Examiner is unable to issue an immediate Notice of Allowance, the Examiner is respectfully requested to telephone the undersigned attorney with a view towards resolving the outstanding issues.

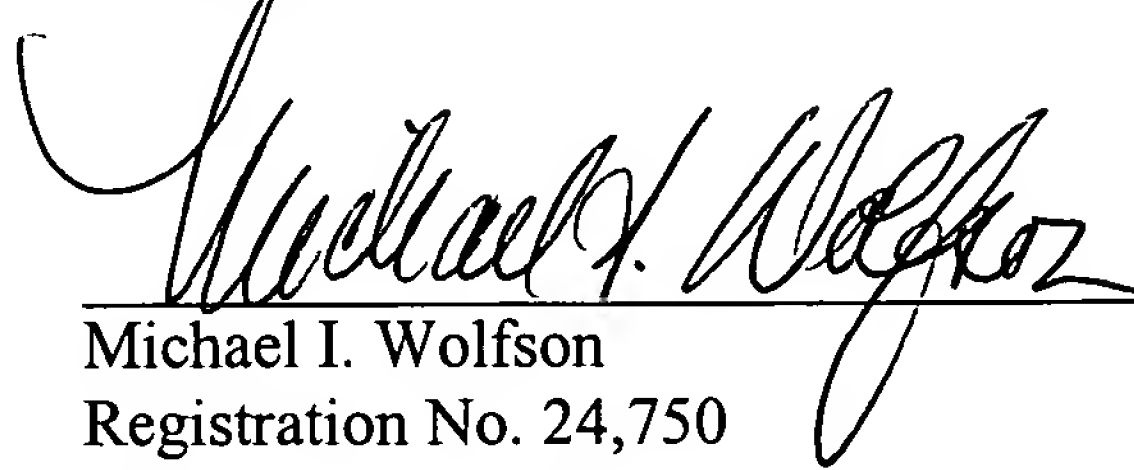
Request For Refund

Applicant has filed an accompanying Petition under Rule 136(a) with the appropriate fee. However, in view of the issuance of the Advisory Action on April 19, 2000, more than four months after filing the Amendment After Final Rejection on December 14, 1999, applicant respectfully request that only a one month extension should be due with the Amendment. Refund of the excess paid herewith is respectfully requested.

If there any questions about this Amendment or Request for Refund, please contact the undersigned attorney.

Early and favorable action is earnestly solicited.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Michael I. Wolfson", is written over a horizontal line.

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